

CLAIMS

1. Apparatus for selecting items from a product database, the apparatus comprising:
a display database for storing a set of display items,
data-storage means for storing attribute data items each associated with one or more
5 of the display items;
data-storage means for storing a score value for each attribute data item;
means for displaying a subset of the display items selected from the display
database;
means for amending the score values in response to the user inputs
10 means for retrieving, from the data-storage means, attribute data items associated
with any display item
means for retrieving from the display database, one or more display items selected
in accordance with the score values associated with attribute data items,
output means for displaying an output identifying the selected further second
15 display item or items.
2. Apparatus according to claim 1, further input means for receiving a user input
identifying a first display item selected from the displayed subset, and wherein the score
values for each attribute data item can be altered in response to such user interaction
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3. Apparatus according to claim 1 and 2, wherein the means for retrieval operate on
the basis of assigning an aggregate score to each display item based on the current score
values of attribute data items associated with that display item
- 25 4. Apparatus according to claim 2 or 3, wherein the means for retrieval comprises
means for generating a probabilistic function, such that the current aggregate score of a
display item determines the probability of its selection.
5. Apparatus according to claim 5, wherein provision is made for users to input both
30 positive and negative reward values.
6. Apparatus according to any of claims 1 to 5, wherein the data storage means
comprises means for storing real value weights associating attribute data items with display
items
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7. Apparatus according to any preceding claim, wherein the display includes non-visual
elements.

8. Apparatus according to any preceding claim, further comprising user profile generation and retrieval means for recording attribute data associated with inputs made by individual users and using the attribute data to initialise further sessions operated by the same users.
9. A method of selecting items from a database, comprising the steps of:
displaying a set of display items selected from a display database,
storing attribute data items each associated with one or more of the display items;
storing a score value for each of the attribute data items.
updating the display at intervals with new display items
receiving an input identifying a first display item selected from the set of displayed items;
retrieving, from the data-storage means, attribute data items associated with the display item identified in the user input,.
updating the score values of attribute data items in response to user input
continuing to update the display at intervals using the updated score values of attribute data items to bias the selection process
10. A method according to claim 9, wherein the items selected for display are selected according to a process which uses the attribute data item scores to bias a probabilistic selection across the display items
11. A method according to claim 9 or 10, wherein each attribute data item has a score value which is altered according to user interaction with display items.
12. A method according to claim 11, wherein each display item is associated with a number of attribute data items, and where an aggregate score is created for that display item, using the score values of associated attribute data items.
13. Apparatus according to claim 11 or 12, wherein one or more of the display items may be selected using a probabilistic function, such that the aggregate score of claim 10 determines the probability of its selection.
14. A method according to claim 9, 10, 11, 12 or 13 wherein user-generated reward values in respect of selected display items are used to generate associated score values for the attribute data items associated with the display item, the score values being used to

create an aggregate score for associated display items and hence bias the probabilistic selection process

15. A method according to claim 14, wherein the attribute data items are associated
5 with the display items using real-value weights which modify the generation of score values and the creation of an aggregate score.

16. A method according to any of claims 9 to 15, where the changes to attribute data
item score values are so arranged that the sum of score values across all attribute data items
10 is zero

17. A method according to claim any of claims 9 to 16, wherein reward values may take both positive and negative values.

15 18. A method according to any of claims 9 to 17 wherein reward values may accrue not only to attribute data items associated with a display item selected by the user, but also to attribute data items associated with display items which were available for selection in competition with the selected item either by being simultaneously present on the display means or by having been recently displayed.

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19. A method according to claim 18 wherein the reward accrued by attribute data items due to association with non-selected display items is negative where the selected display item reward is positive, and positive where the selected display item reward is negative.

25 20. A method according to any of claims 9 to 16, wherein the display includes non-visual elements.

21. A method according to any of claims 9 to 19, wherein user profiles are generated using the attribute data associated with the selections made by individual users.

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22. A method according to any of claims 9 to 20 wherein a further set of display items exists which is not selectable by the user for amending the score values, the further display items being associated with attribute data items drawn from a set wholly or partly overlapping with the set of attribute data items associated with the interactive display items, the further
35 display items being selected, according to the associated attribute data items, for display on a separate display means, or on a separate part of the display means used for interactive display items

23. A method according to any of claims 9 to 22 wherein a user may initiate a further type of interaction, such as purchase or request for further information, by selection of display items.

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24. A computer program for performing the method of any of claims 9 to 23.

25. A computer program product directly loadable into the internal memory of a computer, comprising software code portions for performing the steps of the method of any
10 of claims 9 to 23 when the product is run on a computer

26. A computer program product stored on a computer usable medium, comprising:
computer-readable program means for causing a computer to generate a
display of a set of display items selected from a display database,
15 computer-readable program means for causing the computer to store a set of
attribute data items each associated with one or more of the display items
computer-readable program means for causing the computer to respond to an input
identifying a first display item, selected from the currently displayed set, computer-
readable program means for causing the computer to retrieve, from the data-storage means,
20 attribute data items associated with the display item identified in the user input,.
computer-readable program means for causing the computer to select one or more
further display items associated with the retrieved attribute data items , and
computer-readable program means for causing the computer to generate a display of
the selected further display item

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